



MISSOURI TIMBER PRICE TRENDS

Jan.-March, 2014, Vol. 24 No. 1

Missouri Department of Conservation, Forestry Division

Doyle (North) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.	# of Rpts.
Veneer							
Walnut, Black	\$5,600	\$1,310	\$3,815	\$3,890	\$1,845	75 Doyle - MBF	21
White oak (group)	\$2,400	\$1,250	\$1,295	\$1,255	-	47 Doyle - MBF	4
Sawlogs							
Hard Maple	\$440	\$80	\$180	\$120	\$90	25 Doyle - MBF	6
Hickory	\$440	\$100	\$145	\$140	\$90	24 Doyle - MBF	10
Mixed Hardwoods	\$280	\$50	\$105	\$95	\$160	497 Doyle - MBF	22
Oak (mixed species)	\$305	\$120	\$285	\$270	\$150	390 Doyle - MBF	5
Post Oak	\$220	\$90	\$120	\$120	\$185	16 Doyle - MBF	6
Red oak (group)	\$360	\$50	\$155	\$155	\$120	974 Doyle - MBF	21
Soft Maple	\$220	\$120	\$190	\$185	\$190	119 Doyle - MBF	4
Walnut, Black	\$2,000	\$450	\$1,530	\$1,540	\$730	205 Doyle - MBF	22
White oak (group)	\$450	\$100	\$230	\$215	\$195	998 Doyle - MBF	25
Stave Logs							
White oak (group)	\$1,440	\$400	\$515	\$515	-	221 Doyle - MBF	13

International (South) Stumpage Prices

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.	# of Rpts.
Sawlogs							
Hickory	\$310	\$70	\$175	\$170	\$155	251 Int. - MBF	23
Mixed Hardwoods	\$235	\$80	\$140	\$190	\$225	40,817 Int. - MBF	16
Oak (mixed species)	\$485	\$75	\$175	\$170	\$165	2,058 Int. - MBF	18
Post Oak	\$250	\$75	\$155	\$130	\$90	164 Int. - MBF	14
Red oak (group)	\$375	\$160	\$265	\$260	\$210	5,999 Int. - MBF	22
Shortleaf Pine	\$310	\$50	\$75	\$75	\$135	774 Int. - MBF	12
Walnut, Black	\$250	\$125	\$125	-	\$560	4 Int. - MBF	3
White oak (group)	\$375	\$160	\$220	\$230	\$210	902 Int. - MBF	23

Doyle (North) Stumpage Prices (in BF)

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.	# of Rpts.
Veneer							
Walnut, Black	\$5.60	\$1.31	\$3.82	\$3.89	\$1.84	75 Doyle - BF	21
White oak (group)	\$2.40	\$1.25	\$1.29	\$1.25	-	47 Doyle - BF	4
Sawlogs							
Hard Maple	44¢	8¢	18¢	12¢	9¢	25 Doyle - BF	6
Hickory	44¢	10¢	14¢	14¢	9¢	24 Doyle - BF	10
Mixed Hardwoods	28¢	5¢	11¢	10¢	16¢	497 Doyle - BF	22
Oak (mixed species)	31¢	12¢	28¢	27¢	15¢	390 Doyle - BF	5
Post Oak	22¢	9¢	12¢	12¢	18¢	16 Doyle - BF	6
Red oak (group)	36¢	5¢	15¢	16¢	12¢	974 Doyle - BF	21
Soft Maple	22¢	12¢	19¢	19¢	19¢	119 Doyle - BF	4
Walnut, Black	\$2.00	45¢	\$1.53	\$1.54	73¢	205 Doyle - BF	22
White oak (group)	45¢	10¢	23¢	21¢	19¢	998 Doyle - BF	25
Stave Logs							
White oak (group)	\$1.44	40¢	51¢	52¢	-	221 Doyle - BF	13

International (South) Stumpage Prices (in BF)

	High	Low	Avg.	Last Qtr.	Last Yr.	Vol.	# of Rpts.
Sawlogs							
Hickory	31¢	7¢	18¢	17¢	16¢	259 Int. - BF	24
Mixed Hardwoods	24¢	8¢	14¢	19¢	23¢	40,817 Int. - BF	16
Oak (mixed species)	48¢	8¢	17¢	17¢	17¢	2,058 Int. - BF	18
Post Oak	25¢	7¢	15¢	13¢	9¢	164 Int. - BF	14
Red oak (group)	37¢	16¢	27¢	26¢	21¢	5,999 Int. - BF	22
Shortleaf Pine	31¢	5¢	8¢	8¢	13¢	774 Int. - BF	12
Walnut, Black	25¢	13¢	13¢	-	56¢	4 Int. - BF	3
White oak (group)	37¢	16¢	22¢	23¢	21¢	902 Int. - BF	23

Published timber prices are based on a rolling average of reports received over the last four issues - that is, one year. Refer to the column headed “# of Rpts.” to get a gauge of how accurate the average prices may be. (“# of Rpts.” refers to the number of sales including a particular species and may sum to more than the number of sales.) Changes since last quarter and last year should be read with caution as the number of reports varies each year and quarter. This report can only be used as a general guide for determining market value of timber. General market and economic conditions, as well as local considerations such as accessibility, terrain, sale size, and tree size and quality also affect the price paid.

All prices and volumes are reported in either International ¼” MBF Scale or Doyle MBF, depending on the region of the state. To convert volume from Int.-MBF to Doyle MBF, divide by 1.2. To convert prices from Int.-MBF to Doyle MBF, multiply by 1.2. To convert from MBF to BF (prices or volume), divide by 1,000.

Foresters reported stumpage prices resulting from 104 timber sales containing 55,450 MBF located throughout the state. There were 84 reports from private lands and 20 reports from MDC lands. There were 67 reports from MDC foresters and 37 reports from Consultant foresters. We would particularly like to thank these Consulting Foresters: Lohmann, Fleming, Kinerk, Meyers, Cunningham, Dwyer, Lumb, Schmollinger, Suchland, Yarnell, Deschu, Enyart, Hefner, Jones, Riggle and Stanton.

Editor’s Note

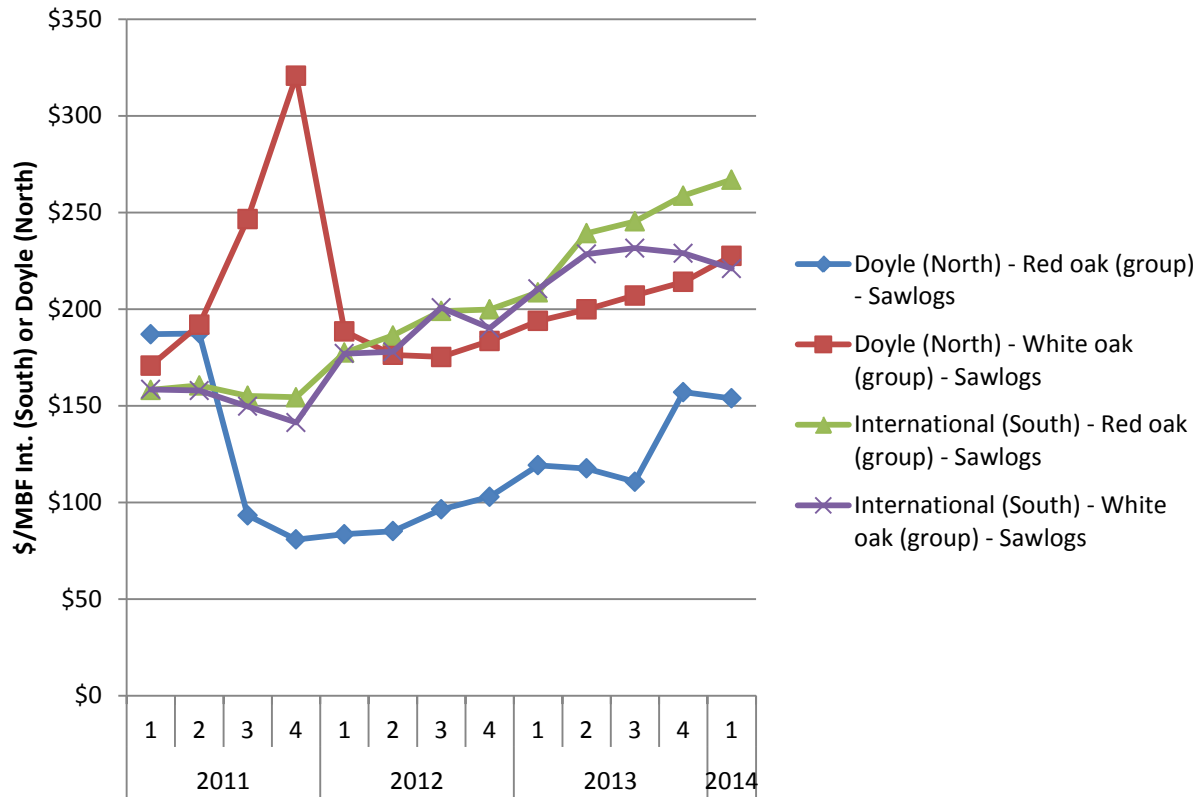
Changes have been made over the past year with the Missouri Department of Conservation’s *Timber Price Trends*. Due to the slow economy over the past few years, and the voluntary nature of timber sale reporting in Missouri, the number of reports we receive has fallen off in recent years. This has meant that some average prices were based on very few reports! Average prices are now calculated based on a rolling dataset of all reports from the past 12 months, with the oldest reports dropping out as new ones come in. This should provide more reports to back up each average price, as well as removing some artificial volatility from the numbers. We have also reduced the number of reporting regions from three to two (North and South), again upping the number of reports that go into each published price. And each region will report prices in their “native” scale (Doyle or International) with no “Statewide” attempt to merge the two.

We would like to thank the members of MOFRAC who helped with this change in direction, as well as the Missouri Consulting Foresters Association and the Missouri Department of Conservation, both of whom have taken “steps” to encourage more reporting from their members and employees.

Remember that one of the most valuable sources for information on log and timber markets is the local Missouri Department of Conservation Resource Forester or your Consulting Forester. Contact the nearest Forest District office for up-to-date, local advice. The Missouri Department of Conservation's Forestry Division, (573) 751-4115, will be happy to provide you with the name and address of the Resource Forester or MDC Regional Office nearest to you. You can locate a Consulting Forester by visiting the Mo. Consulting Forester's Association web site at: www.missouriforesters.com or by visiting the Private Land Assistance page of the MDC website <http://mdc.mo.gov/landown/> and clicking on the “Conservation Assistance Contractors” link.

Tom Treiman and Jason Jensen, Editors

Timber Price Trends



The United States Forest Service (USFS) reports the following from sales on the Mark Twain National forest:

County	Product	Species	Price per MBF
Butler	Sawtimber	Mixed Hardwoods	\$278.50
Carter	Miscellaneous	Mixed Hardwoods	\$66.86
	Posts	Pine	\$14.08
	Sawtimber	Mixed Hardwoods	\$238.65
	Sawtimber	Pine	\$85.38
Howell	Posts	Pine	\$32.32
	Sawtimber	Mixed Hardwoods	\$219.35
	Sawtimber	Pine	\$34.30
LaClede	Miscellaneous	Oak	\$20.55
	Sawtimber	Oak	\$229.63
Ripley	Miscellaneous	Mixed Hardwoods	\$73.80
	Sawtimber	Mixed Hardwoods	\$229.10
Washington	Posts	Pine	\$36.57
	Sawtimber	Oak	\$225.40
	Sawtimber	Pine	\$102.95
Wayne	Sawtimber	Oak	\$314.56
Wright	Posts	Pine	\$8.07
	Sawtimber	Pine	\$27.17

The Word on the Street

By Jason E. Jensen, CF

Markets for every species and every product class are good. This is good news for landowners who may have been waiting for markets to improve. Demand for nearly all products is good. Approximately $\frac{3}{4}$ of the volume of wood harvested in Missouri is an oak species. Markets are currently good for nearly every species including hickory, maple (both hard and soft), and cottonwood. Markets continue to be very good for stave quality white oak and every grade of walnut. Red oak markets in the northern part of the state have really picked back up. This has been a long time coming for foresters and landowners wanting to sell red oak in the north. Pine markets have been improving as well. There is a variety of pine products being sold including posts, poles, shavings logs, cants, and even an increasing number of pallets being built from pine. This is good news for landowners with pine. Pine markets have been sporadic at best for the last 15 years or more. A sustainable pine market is critical to maintaining the health and productivity of much of our southern Missouri forests. I've also had several requests from mills looking for cedar. Although often looked at as a weed, cedar is a valuable species and actually lends itself to potentially more value added opportunities than any other species that we have in the state.

In the southern part of the state, markets for nearly all products and species are good. Every product is in high demand. Grade markets have improved to the point where there may even be a few railroad ties being sawn down into lumber. As a result, tie prices have been increasing in value as

well. Flooring and pallet markets continue to be strong as well.

The winter has certainly been a tough one for those that work in the woods. The weather was probably closer to what used to be an average winter with cold temperatures and snow. Many mills went into fall and winter with low log inventories. The weather for the first quarter of the year did not lend itself to helping build log inventories. As a result many mills are still struggling to try to build inventory.

Competition is intense for standing timber in the southern part of the state. Competition has driven stumpage prices up in many areas. It is not uncommon to have eight or more bidders for timber sales in several southern counties. This can be a double edged sword. It is good if you are a landowner selling standing timber because increased competition equals increased prices. It can also be bad since increased pressure is placed on the forest resource.

I am often asked why we don't report certain products. My goal is to make this report the best and most inclusive of all species and products that I can. The reason that we don't include products such as cedar, posts, utility poles, scragg blocks, pulpwood and sometimes even staves is because of the lack of reports that we receive for those products. This report is published based on stumpage prices that are received from foresters. If we don't receive reports, then we can't report that particular product. As always, readers should realize that this report only provides a snapshot of the markets. It is not meant to be indicative of what you should (or shouldn't) receive for your timber at any particular time. Ultimately

what the landowner is willing to accept and what the buyer is willing to pay is what your timber is worth at any particular time.

Why You Need a Timber Cost Basis When Considering the Sale of Timber

By Shelby Jones

Timber cost basis is a term that is not familiar to many landowners or timber buyers, but it can impact all because of its influence on the sale of timber by private landowners. Timber cost basis relates to federal income tax regulations and the amount of investment in a capital asset by the owner of *standing timber* at the time of purchase of the purchase of the land or inheritance. Having a timber cost basis usually means lower federal income liability by the owner when there is income generated from the timber such as when a timber sale occurs. Having a documented basis is one step in qualifying for *capital gains treatment* of the net profit from a timber sale. The operative word is *gain* which implies that certain deductions can be subtracted from the timber sale proceeds to reduce the amount on which federal taxes are due.

Services of a professional forester are usually necessary to complete the process of calculating the *timber cost basis*. It is important to note here that timber inventory should be completed *prior to* any timber harvesting. Measuring standing volume and grade is nearly impossible once trees are cut!

First, a timber inventory or "cruise" is completed to determine the current volume of timber on the property, by species and grade. Average growth rates of

the predominant species is also measured. If the property was purchased recently (i.e. no more than one growing season has elapsed), a current market value for the standing timber can be calculated. If the property was purchased or inherited several years ago, the forester can calculate the volume that was present on the purchase date by using the growth rate as a discount rate and the use of timber growth & yield software programs. Historic records of stumpage prices are available in Missouri as far back as 1991 through Missouri Timber Price Trends. Thus, it is possible to determine the timber cost basis of properties acquired many years in the past.

If a landowner has a Stewardship Plan or other timber management plan that was prepared during the current ownership, it is possible that sufficient data exists to calculate a timber cost basis without completing a new inventory, thus saving expenses. Cost basis information is NOT generally provided within a Stewardship Plan, but some consulting foresters provide it as a free or low cost service when they compile the plan. It is a good idea to check your plan to determine if you are the lucky recipient of this service.

Second, the forester will combine the inventory growth and yield data, historic stumpage information, and land sale/appraisal information from the landowner to calculate the estimated value the landowner has invested in his standing timber asset. The results are usually entered into a *Form T*, federal tax form to be kept with valuable records by the landowner. Additional parts of the form will be completed when a

timber sale is made and the form will become part of the owner's tax filing for the appropriate tax year.

There are a few cautions for landowners who are interested in completing a timber cost basis for their property:

1. Use a professional forester. The inventory process and subsequent analysis is not a do-it-yourself exercise. Currently, this will be an expense for you as it will be necessary to engage the services of a private, consulting forester. (Public agency foresters are not permitted to provide income tax related information to private individuals, although they often complete a timber inventory and management plan without charge, which a consulting forester can use for the cost basis analysis) However, the fees of the consulting forester enter into the calculation of the cost basis, so they are actually deductible.
2. There may be a *Certified Appraisal* having been completed as part of the purchase or inheritance process for the property. This appraisal may or may not include an estimated value for your timberland! Real estate appraisals rarely include any estimate of the value of the actual trees or the volume of potential wood products. The values in a real estate appraisals generally reflect *LAND* values and may or may not be indicative of what is actually growing there. A forester will be able to work within the values listed in the appraisal to determine the appropriate

amount to be associated with the value of the standing timber with the remainder allocated to a bare land value. *Real estate appraisals are not generally recommended for calculating timber cost basis.*

3. If you are contemplating a timber sale, consider the services of a professional forester to assist with the entire process. It is very important that you know exactly what you are selling, terms and conditions of the sale, and your responsibilities to the buyer. A forester can provide the guidance necessary for an optimum outcome for both the buyer and the seller. They can also help you prepare figures for your tax accountant who may not be familiar with the unique aspects of timber tax regulations.

For more specific information regarding timber sale income and taxes, there are three (3) Guide Sheets available from the University of Missouri. Free copies can be downloaded from the following website.

<http://snr.missouri.edu/forestry/extension/publications.php>

Managing Your Timber Sale Tax, # G5056 by John Dwyer, Larry Godsey, and Hank Stelzer.

Determining Timber Cost Basis, # G5055 by John Dwyer and Shelby Jones

Selling Timber: What the Landowner Needs to Know by Hank Stelzer, # G5051.

The National Timber Tax website is an excellent source for answers to all timber taxation questions.

Best Bid System for Selling Timber

By Jason E. Jensen, CF

Historically forestry division has always accepted the high bid for stateland timber sales. The high bid on a timber sale does not always result in the best management. The “best bid system” moves towards a performance based approach. This system rewards loggers that demonstrate good performance. The new bidding process is achieving a number of objectives. It provides a tangible incentive for logging crews to send all crew members through Professional Timber Harvester training. It also acknowledges the performance and commitment of Certified Master Loggers. The system provides a tangible benefit for Master Loggers and gives others a reason to consider applying for certification. The Department is very concerned about the quality of the management and is willing to pay for performance. It also provides landowners with the knowledge and confidence that there are trained and certified loggers available to assist with management of their forest. The best bid system has reduced contract administration time which allows staff to focus on other state and private land priorities.

There are several outcomes that we experiencing from this system including:

1. We are getting better management of our forests.
2. Additional loggers have signed up for the Professional Timber Harvester course.

3. Additional loggers are enrolling in the Certified Master Logger program.
4. Loggers have traditionally complained about the cost associated with Professional Timber Harvester training and Master Logger Certification. This system helps compensate them for the costs associated with the program.
5. Staff spend less time on timber sale administration since we are working with better contractors. This allows us to reallocate staff time to other program areas.
6. Better performance of Certified Master Loggers will carry over on private land timber sales that aren't conducted with the assistance of a forester.

The performance based bid system that MDC is utilizing provides an incentive for good performance on both state and private land timber sales. It will also provide more staff time to conduct additional state and private land forestry projects. This bidding system will help MDC move towards the goal of raising the bar on the forest products industry and rewards loggers that are committed to outstanding performance.

Urban Wood Workshops

The Missouri Department of Conservation is sponsoring two workshops, May 7th in Springfield and the May 8th in Carthage, on potential business opportunities that can be realized through the utilization of trees growing in urban areas. These two (repeated) workshops will discuss the potential for using urban trees

as a profitable wood product. Take urban discarded timber resources and produce desirable niche products such as flooring, furniture, lumber, mulch/compost and other valuable products. Contact information: terry.truttmann@mdc.mo.gov For reservations: Springfield- 417-895-6880 or Carthage- 417-629-3423

34th Annual Tree Farm Conference

The 34th annual Missouri Tree Farm Conference will be held at Bill Haag's Tree Farm near Portland, MO on April 18-19. Bill Haag has been passionate about wild-life management and healthy forests on his Callaway county farm ever since he began acquiring land in 1996. His strong interest in upland wildlife is a motivating force for Bill. In addition to deer and turkey that many landowners manage for, Bill is also improving conditions for grouse on his place. Bill has ambitiously managed his property to produce positive results in forest health, wildlife habitat, water quality, and recreation on over 900 acres. In 2013, Bill was named Tree Farmer of the year for all his great work and outreach. He will host the 2014 Tree Farm Conference in conjunction with the Ruffed Grouse Chapter of the Quail and Upland Wildlife Society. Mark the date of April 19th to join us on the Haag property. For more information call 818-645-5399.

Logger of the Year Awards

The Missouri Department of Conservation is accepting nominations for the 2014 Logger of the Year award. The award has two levels including the

Regional Logger of the Year and the State Logger of the Year. A regional winner can be chosen from each of the eight MDC regions. The state award is chosen from the regional winners. Nominations must be made to the Forestry Regional Supervisor in the respective region (see list of regional contacts on the last page of the report). Nominations should be in narrative form explaining the logger's abilities, skills, and willingness to work with others. The criteria for choosing the award include:

1. Must be a logger operating in Missouri.
2. Must have completed the *Professional Timber Harvester's Training Program* and be current with the qualifications (or equivalent training if the logger is an out of state resident.)
3. Must be practicing sustainable forest management, have good forest product utilization, and are implementing best management practices.
4. Must have low residual tree damage on their harvests.
5. Must be practicing safe work habits and preferably using all the safety equipment.
6. Must have no recent complaints or issues working with landowners and foresters on timber sales.

Nominations must be received no later than April 21, 2014.

Carbon Collectors in the Sky

Federal government to provide incentives for building tall with wood

by Henry Melcher

If cities are serious about tackling climate change, then the solution may be found in building the city of tomorrow to look more like the city of yesterday. As glass and steel towers continue to rise, wood skyscrapers are likely to start sprouting alongside them. Multi-story and high-rise wood buildings are already planned or rising in Europe and Canada. They're architecturally distinct, they're green, and they're safe too. And now the U.S. Department of Agriculture is trying to get America in on the action.

Agriculture Secretary Tom Vilsack recently took the first step to make that happen. He announced that the USDA is entering into a partnership with WoodWorks—an organization that provides support to the wood building industry—to educate architects and engineers on the potential of using wood as material. The department will also invest \$1 million into a prize competition for developers and designers to demonstrate the structural viability, and architectural opportunity, of high-rise wood construction.

"Building stronger markets for innovative new wood products supports sustainable forestry, helps buffer greenhouse gas emissions, and puts rural America at the forefront of an emerging industry," said Secretary Vilsack at the announcement.

The secretary understands that designing and building multi-story wood structures won't be easy for architects and engineers—at least

not yet. He tells AN that the money included in these initiatives will help offset some of the costs associated with initial design challenges, necessary code-variances, and engineering studies.

"What we're doing is essentially creating a resource that reduces the risk of trying something different," said Secretary Vilsack.

Building—and especially building tall—won't just add much needed architectural variety to our increasingly glass and steel cities; it will dramatically cut down on carbon emissions. Because, for all the green roofs and solar panels that sleek new towers may offer, the process of producing all that steel and concrete releases a significant amount of carbon. By some estimates, the production process accounts for 8% of total global carbon emissions.

"The great thing about wood is that it absorbs carbon and sequesters carbon permanently," says Vilsack. And responsibly harvesting forests, explains the secretary, can actually reduce greenhouse gas emissions by reducing the risk of wildfire.

This isn't necessarily about chopping down healthy trees," says Vilsack. "It can just as easily be about dealing with diseased wood that exists in the western part of the United States."

He points to the 45 million acres of forest, which have been infected by the mountain pine beetle and become highly-susceptible to catching fire. "Better that we use that diseased wood for a new product like cross-laminated timber that can be used in construction projects that can permanently sequester the carbon

and reduce the risk of intensive forest fire,” says Vilsack.

Cross-laminated technology essentially means crisscrossing and layering lumber to create sturdier and more fire-retardant wood panels. This technique is already being used for wood towers in Canada and Sweden. And last year, SOM conducted the Timber Tower Research Project, which proposed new ways to make wood high-rises a reality.

Fire concerns are an issue, but they shouldn't be. As AN reported last year, “heavy timber and cross-laminated timber actually have a built-in fire protection: dense wood will burn slowly, charring instead of catching fire all at once. Part of bringing a wood building up to code is providing enough wood so that even after fire produces a ‘char layer,’ there is still enough left to support the structure.”

Still, Vilsack says he understands the “hesitation” behind tall, wood structures, but he believes that some investment and education could change that.

While the USDA's new initiatives won't usher in a wave of wood towers, they lay the groundwork for a new type of architecture; and they help designers and developers take the next steps.

“There's momentum building,” says Vilsack, “but it's going to take some time.”

Solvay launches production of torrefied biomass

Solvay has launched the production of torrefied biomass at an industrial scale in the United States, creating a new business that aims to provide an innovative

and renewable energy solution. This business will be run by the recently created Solvay Biomass Energy joint venture between Solvay and U.S. company New Biomass Energy (NBE).

Torrefied biomass, which handles and burns similarly to coal, is produced through torrefaction, a process that modifies the chemical properties of waste wood and biomass. Torrefied biomass can immediately and practically substitute coal, enabling power plants to generate clean energy.

Today, some power plants in Europe use traditional wood pellets to replace coal. Torrefied biomass, however, contains 35% more energy by weight than wood pellets, which also yields significant logistical benefits to customers. Moreover, Solvay is improving the water repellent properties of torrefied biomass to further enhance its storage and handling properties.

“This new business has a two-fold objective: on the one hand, to offer innovative and competitive solutions to utilities and energy companies, allowing them to lower the cost of using biomass in their plants, and in parallel to expand our access to biomass and to create new biosourced applications. Solvay aims to further develop products and technologies that support the global transition to sustainable energy,” said Philippe Rosier, President of Solvay Energy Services.

Torrefied biomass is produced in Quitman, Mississippi at a plant that was built and developed by NBE. Solvay will provide its industrial expertise to more than triple annual production capacity to 250,000 tons by the end of

2014 from 80,000 tons currently. Solvay Biomass Energy will use by-products, such as sawmill residues, from the highly developed timber industry in the area's managed forests.

Five Causes of Stumpage Price Variation Posted on December 17, 2013

by Mike Fiery

Wood feedstock costs are the largest variable costs of a bioenergy project. It is therefore important to consider the stumpage price in a supply region during the site selection process.

Stumpage price – the price paid to a landowner for the right to fell trees and remove them from the owners' timberland – can vary dramatically across local wood basins. Increases and decreases are typically tied to one of the five main causes of stumpage price variation.

Competition: Wood basins are generally small in size and only consist of a handful of counties. Depending upon whether timber is located in a highly competitive or a marginal area, pine sawtimber prices can vary by as much as \$8-12 per ton. Forest products companies prefer to procure wood from as close to their mills as possible, and as a result, pricing can vary greatly within a relatively compact geographic distance.

Inventory: When inventories run low, mills will often go out on the open market and pay a premium for wood. This strategy ensures a mill obtains the volume it requires to operate at its desired production level.

Seasonality: Wet weather makes it difficult for loggers to supply as many loads of wood per day as

they would during dry times. Tracts considered wet weather tracts can be harvested year round and, because of their accessibility, earn a big premium. Loggers shift production to wet weather tracts during months that see more rainfall, and mills pay a higher price to maintain their needed supply.

Tract Size: The cost to move equipment from one tract to another is a major expense for loggers. Large size tracts of 200 acres or more give loggers the opportunity to increase their weekly production by harvesting and hauling more loads per day. For this reason, tracts with more volume and acreage will often secure price premiums.

Tree Size and Quality: Pricing can often appear product-based when, in fact, the size of the tree is what matters. In general, pine logs fall into the following size categories: 5-7" diameter at breast height (DBH) is pulpwood, 8"-11" comprises chip-n-saw, and 12" and larger are considered sawtimber. The per-ton value of trees increases as logs gain size. For example, sawtimber with a DBH of 18" commands a higher price than 12" sawtimber.

These variables contribute to the complexity of the wood supply chain and marketplace. In order to understand market price, it is important to thoroughly examine these factors in light of both short- and long-term risks and opportunities.

Information provided by a wood supplier offers an individual view of the market that is colored by a vested interest in selling timber. Forest2Market, on the other hand, has collected stumpage sales data, including price and volume by timber class (pulpwood, chip-n-saw, sawtimber, etc.), weather

conditions, tract size and timber quality, for 13 years. Our main goal is to provide accurate information to those who make decisions within the forest supply chain. Learn more about our [timber price services](#).

This article was updated from a blog post first published in November 2011: [Five-Causes of Stumpage Price Variation in the US South](#).

Using More Wood for Construction Can Slash Global Carbon Emissions
by ClickGreen staff. Published Tue 01 Apr 2014 14:04, Last updated: 2014-04-01

A Yale University-led study has found that using more wood and less steel and concrete in building and bridge construction would substantially reduce global carbon dioxide emissions and fossil fuel consumption.

Despite an established forest conservation theory holding that tree harvesting should be strictly minimized to prevent the loss of biodiversity and to maintain carbon storage capacity, the new study shows that sustainable management of wood resources can achieve both goals while also reducing fossil fuel burning. The results were published March 28 in the Journal of Sustainable Forestry.

In the comprehensive study, scientists from the Yale School of Forestry & Environmental Studies (F&ES) and the University of Washington's College of the Environment evaluated a range of scenarios, including leaving forests untouched, burning wood for energy, and using various solid wood products for construction.

The researchers calculated that the amount of wood harvested globally each year (3.4 billion cubic meters) is equivalent to only about 20 percent of annual wood growth (17 billion cubic meters), and much of that harvest is burned inefficiently for cooking. They found that increasing the wood harvest to the equivalent of 34% or more of annual wood growth would have profound and positive effects:

- Between 14% and 31% of global CO2 emissions could be avoided by preventing emissions related to steel and concrete; by storing CO2 in the cellulose and lignin of wood products; and other factors.
- About 12% to 19% of annual global fossil fuel consumption would be saved including savings achieved because scrap wood and unsellable materials could be burned for energy, replacing fossil fuel consumption.

Wood-based construction consumes much less energy than concrete or steel construction. Through efficient harvesting and product use, more CO2 is saved through the avoided emissions, materials, and wood energy than is lost from the harvested forest.

"This study shows still another reason to appreciate forests — and another reason to not let them be permanently cleared for agriculture," said Chadwick Oliver, the Pinchot Professor of Forestry and Environmental Studies, director of the Global Institute of Sustainable Forestry at F&ES and lead author of the new study. "Forest harvest creates a temporary opening that is needed by forest species such as butterflies and some birds and deer before it regrows to large trees. But conversion to agriculture is a permanent loss of

all forest biodiversity.”

The manufacture of steel, concrete, and brick accounts for about 16 percent of global fossil fuel consumption. When the transport and assembly of steel, concrete, and brick products is considered, its share of fossil fuel burning is closer to 20% to 30%, Oliver said.

Reductions in fossil fuel consumption and carbon emissions from construction will become increasingly critical as demand for new buildings, bridges and other infrastructure is expected to surge worldwide in the coming decades with economic development in Asia, Africa, and South America, according to a previous F&ES study. And innovative construction techniques are now making wood even more effective in bridges and mid-rise apartment buildings.

According to Oliver, carefully managed harvesting also reduces the likelihood of catastrophic wildfires. And maintaining a mix of forest habitats and densities in non-reserved forests — in addition to keeping some global forests in reserves — would help preserve biodiversity in ecosystems worldwide, Oliver said. About 12.5% of the world's forests are currently located in reserves.

“Forests historically have had a diversity of habitats that different species need,” Oliver said. “This diversity can be maintained by harvesting some of the forest growth. And the harvested wood will save fossil fuel and CO₂ and provide jobs — giving local people more reason to keep the forests.”

The article, “Carbon, Fossil Fuel, and Biodiversity Mitigation with Woods and Forests,” was co-

authored by Nedal T. Nassar of the Yale School of Forestry & Environmental Studies and Bruce R. Lippke and James B. McCarter of the University of Washington.

Housing Markets

By Urs Buehlmann

Several housing market indicators exhibited declines in January — this is not atypical for a winter month. A bright spot was “New” house sales — which, in future months, may be revised higher as private estimates recorded more sales than the reported United States DOC data. Construction spending data was also a positive indicator. As in previous months, the near-term outlook on the U.S. housing market remains unchanged — there are potentially several negative macro-factors or headwinds at this point in time for a robust housing recovery (based on historical long-term averages). Why?

- 1) Lack-luster household formation,
- 2) A lack of well-paying jobs being created,
- 3) A sluggish economy,
- 4) Declining real median annual household incomes,
- 5) Strict home loan lending standards,
- 6) New banking regulations, and
- 7) Global uncertainty?

2014 Farm Bill: Forestry and Energy Provisions

Posted on February 10, 2014
by LeAndra Spicer

Last week was a productive, albeit well overdue, one for the Farm Bill. President Obama signed the bill into law on Friday, February 7, shortly after the Senate approved the bill earlier in the week. House representatives previously passed

the Agricultural Act of 2014 - now the Farm Bill - on January 29. The bill rings in at just over \$956 billion, and by Congressional Budget Office estimates will reduce spending over 10 years by \$16.6 billion.

Forestry Title Forest Roads Provision

A clear win for the forest industry is a provision that states forest roads are not point sources of pollution. The provision gives legislative weight to a Supreme Court ruling and the Environmental Protection Agency's long-standing position that forest roads are not subject to regulation under the Clean Water Act.

Forest Products Fairness Act

The 2008 Farm Bill allowed products that contained as little as 25 percent biobased content to qualify for incentives under the BioPreferred Program (Biobased Markets Program), yet excluded a number of traditional wood and forest products with up to 100 percent biobased content. The 2014 Farm Bill amends this oversight to allow forest products to qualify as biobased products.

Christmas Tree Assessment

Perhaps one of the more unique provisions included in the new farm bill is a 15-cent fee to be assessed on both home-grown and imported Christmas trees. Contention between Christmas-tree growers who supported the fee and industry participants who did not had stalled the assessment for the past three years. Similar to a check-off program, the funds generated from the assessment will go towards the marketing and

promotion of Christmas trees grown on US soil.

Energy Title

Rural Energy for America Program (REAP) Designed to encourage agriculture producers and business owners in rural areas to invest in energy efficiency and renewable energy, the program will receive \$50 million in mandatory funding annually.

Biomass Crop Assistance Program (BCAP)

Providing financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to cultivate biomass feedstock for sale to energy producers, the program is set to receive \$25 million in mandatory funding annually. Monies will go towards both establishment and matching payments.

Biorefinery Assistance Program

Renamed the Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program, the program will continue to offer loan guarantees for renewable energy projects such as the construction and retrofitting of refineries to develop and produce advanced biofuels. The new bill expands the program to assist the promotion of renewable chemicals and biobased manufacturing production facilities. Funding for this program is discretionary, with \$75 million in funds set aside through 2018.

Bioenergy Program for Advanced Biofuels

Intended to deliver production payments for advanced bioenergy

sources including biofuels and biopower, this program will receive \$15 million in mandatory funding annually.

Master Logger Certification

The logger plays a critical role in the harvesting of your timber sale. The Master Logger Certification (MLC) program can make your choice of selecting a logger easier. The MLC program can help provide piece of mind for the landowner. Master Loggers are professional, properly trained, and meet the highest standards placed on the industry today. The MLC program is a performance based program that recognizes both training and experience. To find a Master Logger in your area visit the following website:

<http://www.moforest.org/MLC/mmldirectory.html>

Professional Timber Harvester

The Professional Timber Harvester (PTH) program provides four levels of chainsaw safety training and provides instruction on use and implementation of “best management practices” and forest management. PTH trained loggers possess the knowledge to harvest your timber while insuring that your residual trees, soil, and property are properly cared for. To locate a PTH trained logger in your area visit the following website: <http://www.moforest.org/loggersindex.php>

Did you know that Missouri leads the nation in charcoal production?



Missouri Timber Price Trends tracks market prices for Stumpage. Reports on the Stumpage Market are received from Missouri Department of Conservation Resource Foresters and private consulting foresters. Stumpage refers to timber sold on the stump and does not reflect delivered mill prices. These reports should serve as a general guide to track stumpage prices. Landowners should not use this report to replace a timber inventory and marketing assistance as methods of conducting a sale. Missouri Department of Conservation Resource Foresters will be able to provide information on current, local market conditions. Details of all private sales and delivered prices are kept confidential.

Did you know that 92% of the residue produced from processing logs is also marketed as a product?

Estimates of Consumption of US Hardwoods

	2005	2006	2007	2008	2009	2010	2011	2012	2013	% Change 2012	% Change 2005
Pallets	3.8	3.7	3.6	3.5	3.0	3.2	3.26	3.27	3.643	11.4%	-4.1%
Furniture	1.2	1.1	1.0	0.7	0.3	0.35	0.29	0.30	0.427	42.3%	-64.4%
Exports	1.3	1.3	1.2	0.9	0.8	1.07	1.2	1.32	1.462	10.8%	12.5%
Millwork	1.3	1.2	1.0	0.7	0.4	0.43	0.24	0.26	0.387	48.9%	-70.2%
Cabinets	1.6	1.5	1.3	1.2	0.7	0.4	0.34	0.36	0.392	8.9%	-75.5%
Flooring	1.5	1.4	1.3	0.8	0.5	0.59	0.51	0.55	0.753	36.9%	-49.8%
Railway Ties	0.85	0.96	0.92	0.94	0.89	0.89	0.98	1.04	1.114	7.1%	31.1%
Board Road/Mat Timbers	N/A	N/A	N/A	0.2	0.05	0.075	0.12	0.16	0.369	130.6%	N/A
Total Estimated Consumption	11.55	11.16	10.32	8.94	6.64	7.01	6.94	7.26	8.55	17.7%	-37.1%

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